

## **ABSTRACT**

ARMSTRONG, JENNA MONTGOMERY. Decreasing the Risk of Maltreatment for Children Experiencing Homelessness: An Evaluation of Triple P in Shelters. (Under the direction of Dr. Mary E. Haskett).

This study was designed to examine the effectiveness of an evidence-based positive parenting program—Triple P—in shelter settings for families experiencing homelessness. A significant evidence base supports the effectiveness of Triple P Discussion Groups but the intervention had never been evaluated in a shelter setting where there is a critical need for evidence-based parenting programs. Using a within-group pre- and post-intervention with 3-month follow-up design, 39 mothers residing in a shelter with a child ages 2 to 6 years participated in the study. Results showed significant decreases in dysfunctional parenting practices and child problem behaviors across time but no change in the direct assessment of child maltreatment risk as measured by the Brief Child Abuse Potential Inventory. Additionally, mothers rated their satisfaction with the program very high immediately after the group and again three weeks later. Results suggest Triple P Discussion Group is an acceptable and possibly effective intervention for this vulnerable population in need of parenting support. Clinical implications and limitations of findings are presented.

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Decreasing the Risk of Maltreatment for Children Experiencing Homelessness:  
An Evaluation of Triple P in Shelters.

by  
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## **DEDICATION**

This dissertation is dedicated to my family. Without their support this document and all it represents would have never been possible. To my partner, whose calm, stabilizing force supported me through it all and who graciously edited a few too many graduate school papers. To my son, for providing me the positive parenting lessons I really needed, and teaching me how to find joy in the simple things. To my father, whose unwavering support of my life endeavors has enabled me to be the person I am today. To my grandmother, Sara, for never allowing a “B” to be good enough and for giving me all of my first lessons in feminism. To my mother and sister, who regularly remind me not to take myself too seriously.

## **BIOGRAPHY**

I was the born in Louisville, Kentucky to Robert and Nellie Montgomery. I graduated from DuPont Manual High School and the Youth Performing Arts School as a Dance Major in 2007. I attended the University of Alabama on an athletic scholarship and completed Bachelor's degrees in Psychology and Human Development in 2011 and 2012, respectively. Soon after graduating I married my partner, Daniel Pierce Armstrong, and moved to Raleigh, North Carolina to begin my doctoral studies at North Carolina State University.

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## **Introduction**

In 2013, an alarming 2,483,539 children in the U.S. experienced homelessness, which equates to 1 in 30 children in the U.S. The national rate of children experiencing homelessness increased by 8% from 2012 to 2013 and is projected to continue to grow (America's Youngest Outcasts Report, 2014). Notably, there is a strong link between homelessness and child welfare involvement (Keeshin & Campbell, 2011; Park, Metraux, Brodbar, & Culhane, 2004). A disturbing 58.9% of individuals residing in shelters report having experienced physical abuse during childhood (Pardek, 2005). Parents who experienced maltreatment in their own childhood and adolescence are more likely to become perpetrators themselves (Berlin, Appleyard, & Dodge, 2011; Thornberry, Knight, & Lovegrove, 2012). Considering Perlman and Fantuzzo (2010) found that 40% of children in emergency housing had experienced some form of child maltreatment, the intergenerational maltreatment cycle seems especially relevant. Reducing the risk of maltreatment for children experiencing homelessness should be a central goal for mental health and social services professionals. This study aimed to accomplish two novel tasks: 1) to test the effects of Triple P Discussion Groups for families experiencing homelessness, and 2) to describe the acceptability of Discussion Groups within shelters. Two of the well-documented risks for maltreatment were used as the outcome variables for this study, namely, child problem behaviors and dysfunctional parenting practices. The following literature review provides a theoretical and empirical foundation for the study and a rationale for the study hypotheses.

### **Characteristics of families experiencing homelessness**

While reading the following paragraphs it is important to remember that not all families who experience homelessness experience deleterious outcomes. Many of the families are resilient, despite the cumulative risks they face. Several studies have documented a wide range of

functioning among families who have experienced homelessness (Cosgrove & Flynn, 2005; Gewirtz, DeGarmo, Plowman, August, & Realmuto, 2009). My background discussion will follow a developmental ecological progression; first I will present the individual characteristics of children and parents experiencing homelessness. Then, I will discuss how those characteristics interact to result in a high risk of maltreatment, and conclude by making a case for why positive parenting support could decrease risk of maltreatment.

**Child Characteristics.** The characteristics of children experiencing homelessness vary widely and the lines between where the effects of poverty end and the effects of homelessness begin are blurred. Buckner (2008) effectively summarized the differences in the characteristics between homeless and low-income housed children when reflecting on his meta-analyses —“it is hard to demarcate where the effects of poverty-related sources of risk end and homelessness-specific risks begin” (p. 726). Therefore, the following information includes both the unique characteristics of children experiencing homelessness and the characteristics they share with children living in poverty.

In terms of mental health, children experiencing homelessness are at a greater risk of developing a behavior disorder than low-income housed children. For example, Yu, North, Lavesser, Osborne and Spitznagel (2008) investigated the prevalence of psychiatric and behavior disorders among children, ages 5 to 16, experiencing homelessness and a matched but unequal sample of low-income housed children. They found similar rates of psychiatric disorders for both groups of children, but children experiencing homelessness were over 4 times more likely to meet the criteria for a behavior disorder when compared to low-income housed children. Similarly, Lee and colleagues (2010) found children, ages 5 to 8, residing in transitional housing had greater parent and teacher reported internalizing and externalizing problems than a matched

community sample identified by their teachers as exhibiting significant aggressive behavior. In fact, when compared to the normative mean on the rating of externalizing behaviors, children in transitional housing were a full standard deviation above the normative average. In terms of educational services, 43% of children living in transitional housing were receiving special education services under the category of severe emotional disturbance (Lee et al., 2010). In terms of physical health, several studies indicate that children experiencing homelessness suffer from more chronic physical health problems than most children. For example, children experiencing homelessness have more frequent respiratory infections, ear infections, gastrointestinal problems and have higher rates of asthma than the general population average (America's Youngest Outcasts Report, 2014). Additionally, young children experiencing homelessness have high rates of developmental delays and social-emotional concerns (Haskett, Armstrong, & Tisdale, 2016).

The current study takes into account the developmental period of the child because the developmental period in which a child first experiences homelessness can impact the degree to which homelessness is detrimental. For example, Perlman and Fantuzzo (2010) found that children who experienced homelessness in toddlerhood rather than later in preschool or elementary school were at an even greater risk for low academic achievement by second grade. Given that 51% of all children experiencing homelessness are under age 6 (America's Youngest Outcasts Report, 2014), the developmental period in which most children experiencing homelessness should be considered. Developmental science tells us there are several key tasks that occur between birth to age 5 that could have long-term implications for child development. For example, in infancy attachment to a primary caregiver is developed with a secure attachment being fostered by warm and consistent parenting practices. This attachment status then shapes children's "lens by which they view the world" (Bowlby, 1973). In contrast, less sensitive, harsh

or inconsistent caregiving practices can lead to the formation of an insecure attachment relationship which predicts a negative lens (Moss, Bureau, Beliveau, Zdebik & Lepine, 2009). Many researchers have found associations between parents experiencing homelessness and increased negative parenting behaviors (Koblinsky, Morgan & Anderson, 1997; Lee et al., 2010) making it more likely that their children will develop an insecure attachment. This study targets the very age when children experiencing homelessness are the most vulnerable.

**Parent characteristics.** Parents experiencing homelessness have likely experienced several risk factors that make them more likely to engage in harsh parenting practices. Cutuli and Herbers (2014) outlined several individual-level risk factors for abusive parenting that sometimes characterize parents experiencing homelessness, which include: having less than a high school education, low levels of social support, extreme poverty, history of mental illness, current mental illness, their own experiences of child maltreatment, and recent experiences of domestic violence. Knowledge of individual-level risk factors of fathers experiencing homelessness is missing from the literature. Therefore, the following information pertains mainly to mothers experiencing homelessness—not to discount the important role of fathers. In the following paragraphs, I will outline studies that have described these risk factors in detail and provide a brief summary of how these risk factors relate to the ability of mothers to provide safe, stable, nurturing parenting.

Much of what is known about the individual level risk factors of mothers experiencing homelessness stems from the Worcester Family Research Project. This study, conducted by the National Center on Family Homelessness, involved collection of extensive information related to the risk factors associated with homelessness for about 220 mothers currently residing in shelters and 216 low-income mothers who had never experienced homelessness. Weinreb, Goldberg and

Perloff (1998) concluded that both groups (e.g., low-income housed and homeless mothers) had substantial health needs above the typical population but that mothers experiencing homelessness were twice as likely to have been hospitalized in the last year. Bassuk and colleagues (1996) found that the major differences between homeless and housed women in these low-income groups were economic resources and social supports. Mothers who were homeless and low-income both had substantially smaller social networks than the average person, but mothers experiencing homelessness had social networks with significantly fewer economic resources than housed mothers. This should not discount the significant mental health problems and substance abuse issues both groups of women endure compared to the general population, including but not limited to increased rates of: PTSD, suicide attempts, major depressive disorder, chronic poverty and substance abuse. For example, in 2003 the percentage of women residing in shelters meeting criteria for a major depressive episode was 52.4% and the percentage of women meeting criteria for PTSD was 56.3% (Weinreb, Buckner, Williams, & Nicholson, 2006).

These individual characteristics relate directly to their ability to parent their children. For example, parents experiencing depression are generally less responsive to their child's needs; therefore, infants whose parents are depressed are more likely to develop insecure attachment with their mothers and internalizing behavior problems (Lim, Wood, Miller, & Simmens, 2011; Pelaez, Field, Pickens, & Hart, 2008). Gewirtz, Polusny, DeGarmo, Khaylis, and Erbes (2010) measured the links between PTSD, couple adjustment and parenting behaviors of 2,667 soldiers one year after deployment. They found that the number of PTSD symptoms had an independent effect on parenting behaviors—with more symptoms increasing the likelihood of self-reporting negative parenting behaviors. Also, it is important to consider the stress of poverty coupled with the stress of shelter living. More parental stress is added when parents are residing in shelters

because parents are constantly “parenting in public” and may even experience family separation because older boys are often not allowed to reside in shelters with their family (Friedman, 2000). Additionally, parents must often adhere to strict guidelines about bed-times, child supervision and disciplinary strategies that likely deviate from their old patterns (Friedman, 2000; Swick & Williams, 2010). These stressors, in addition to the individual parent and child health characteristics and larger economic stressors families experiencing homelessness face, cumulatively result in high risk of engaging in dysfunctional parenting practices (Barnett, 2008; Gorzka, 1999).

### **Maltreatment Risk**

Taken together, these high rates of child behavior problems and likelihood of engaging in dysfunctional parenting practices place homeless families at risk for being the victims and perpetrators of child maltreatment (Giardino, Giardino & Isaac, 2014). This jeopardy is compounded by the risk of maltreatment for children living in poverty. Giardino, Giardino and Isaac (2014) reported parents whose income fell below the national poverty line were five times more likely to commit maltreatment (especially neglect) than parents living above the poverty line. Perlman and Fantuzzo (2010) found that 40% of children in emergency housing had already experienced some form of child maltreatment.

Given the high risk of engaging in dysfunctional parenting practices, this study was designed to investigate if a brief parenting intervention could decrease dysfunctional parenting practices. One of the most-often recommended approaches to promote resilience among children experiencing homelessness is to provide evidence-based parent training to families experiencing homelessness (Cutuli & Herbers, 2014; Haskett, Perlman, & Cowan, 2014; Perlman, Cowan, Gewirtz, Haskett, & Stokes, 2012). Parenting programs can be used to address specific risk

factors of maltreatment including harsh parenting behavior and child problem behaviors (Cutuli & Herbers, 2014; Joachim, Sanders, & Turner, 2010; Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009; Sanders, 1999).

### **Evidence-based Parenting Interventions in Shelters**

Despite the well-documented high risk for maltreatment children experiencing homelessness are facing, the prevalence of evidence-based parenting programs in shelter settings is very low (Haskett, Loehman, & Burkhart, 2014). In fact, when parenting interventions are used in shelters they are most often informal and not evidence-based (Haskett, Loehman, et al., 2014; Perlman et al., 2012). Haskett, Loehman and Burkhart (2014) completed an extensive qualitative literature review of parenting programs in shelters. Even with a broad inclusion criterion, excluding studies when the intervention was provided after the families left the shelter, they only found 12 studies to include. Overall, the methodology of these studies was weak. Studies rarely included a control group, follow up assessments, or measurements of treatment fidelity. Most importantly, interventions chosen were rarely evidence-based and if they were, the interventions were significantly modified to meet the unique needs of parents residing in shelters. However, assessment of the feasibility and acceptability of the parenting programs provided was promising for both shelter staff and parents (Haskett, Loehman, et al., 2014). This suggests that if parents are willing to participate, they tend to be happy with the treatment they receive. The critical importance of supporting homeless parents and the limitations in extant literature suggest research is needed to examine the use of evidence-based parenting programs in shelters—a large gap in the literature this study aimed to fill.

## **Triple P—Positive Parenting Program**

**Triple P in shelters.** Triple P – Positive Parenting Program (Sanders, 1999) has been specifically recommended for parents residing in shelters (Cutuli & Herbers, 2014; Haskett, Loehman, & Burkhart, 2014; Haskett, Perlman, & Cowan, 2014) for several reasons. In addition to the strong evidence base in support of Triple P, a foremost reason it has been recommended for families experiencing homelessness is its adaptability across contexts and populations. Triple P is a parenting program designed to prevent or reduce social, behavioral and emotional problems in children by building the knowledge, skills and self-confidence of parents. It encompasses a behavioral and social learning theory approach to positive parenting (Sanders, 1999). Triple P is provided in a tiered service model ranging from prevention services (Level 1) to intensive parenting interventions for high-risk parents (Levels 4 and 5). Level 3 Discussion Groups are considered a moderate level parenting intervention. They are designed to provide specific parent skills training with a focus on improving parent-child interactions and applying positive parenting skills to a broad range of problem behaviors (Sanders, 1999). In addition to building parenting skills, Discussion Groups provide social support and allow for individualization through take-home workbooks and follow-up phone calls to check-in individually with parents. Additionally, Discussion Groups are brief, at only two hours in length, and are delivered in a single session. Given the highly transient nature of the target population, Discussion Groups appeared most suitable for delivery in shelters.

There are four Discussion Group topics, including Hassle Free Meal Times, Hassle Free Shopping, Developing Good Bedtime Routines, and Dealing with Disobedience. Prior studies have focused on effects of Discussion Groups on a single topic, so this investigator considered which topic should be delivered to parents in shelters. Holtrop, Chaviano, Scott and Smith



(2015) interviewed 40 parents living in transitional housing to determine what types of topics, approaches, and considerations they desired in parenting supports provided to them as residents. The most frequently-requested topic by parents was improving child compliance (mentioned by 78%). The content in the Dealing with Disobedience session most closely aligned with improving child compliance across several contexts. In terms of approach considerations, parents in the Holtrop et al. (2015) sample wanted to know how past experiences affect parenting (90%) and specifically more about parenting in the context of transitional housing (70%). There is not anything specifically built into Discussion Groups that addresses past experiences or parenting in transitional housing, but there will be time for parents to discuss this during the group. For activities, parents wanted most to learn from other parents (65%) and to watch videos (60%). Discussion Groups heavily incorporate both of these activities (Holtrop, Chaviano, Scott, & McNeil Smith, 2015). The following paragraphs discuss the existing evidence for the suite of Triple P programs and for Level 3 Discussion Groups specifically.

**Effects of Triple P.** Several studies have found Triple P to be effective at improving parenting practices and reducing child social, emotional and behavioral problems. A recent meta-analysis found moderate overall positive effects of Triple P (all Levels combined) in terms of parent ( $d = .58$ ) and child ( $d = .51$ ) behavioral observations, parenting practices ( $d = .58$ ) and child social, emotional and behavioral problems ( $d = .47$ ) (Sanders, Kirby, Tellegen, & Day, 2014). These effects were found immediately following the intervention and were maintained at follow-up assessment which occurred between six months and one year after the intervention. Triple P has also been found to be effective across several countries outside of Australia, where it was originally developed. Sanders and colleagues (2014) reported country of implementation as a small moderator of effects on some outcome variables (e.g. child social emotional

behavioral and parental adjustment outcomes) but not all (e.g. parenting practices, satisfaction and efficacy). In terms of Level 3 specifically, outcomes were strong to moderate with effect sizes ranging from .8 (parenting practices) to .45 (child social, emotional and behavioral outcomes) and were maintained at follow-up. However, most studies included in this meta-analysis included an individual version of Level 3 rather than the Discussion Group format which will be evaluated in this study.

The broader aim of this study was to determine if Triple P Discussion Groups were effective at decreasing the risk of maltreatment for children experiencing homelessness. Prinz, Sanders, Shapiro, Whitaker and Lutzker (2009) published the first population-level evaluation of the suite of Triple P services in the United States and provided evidence for relatively decreased rates of maltreatment at the population level. They randomly assigned 18 counties to receive Triple P or services-as-usual and found that Triple P counties had significantly less growth of substantiated child maltreatment cases ( $d = 1.09$ ), fewer out of home placements ( $d = 1.22$ ) and fewer injuries related to child maltreatment ( $d = 1.14$ ). Considering the significant overlap between homelessness and maltreatment, a direct assessment of maltreatment risk was included in this study.

**Effects of Discussion Groups.** Six studies were located that evaluated the effects of Level 3 Discussion Groups. Four studies were conducted in Australia with predominantly middle class, college educated parents. The first study, by Joachim, Sanders, and Turner (2010) was a randomized control trial of the Hassle Free Shopping Discussion Group that included 46 (26 in intervention group; 20 control group) parents with children ages 2 to 6-years ( $M = 3.23$  years;  $SD = 1.03$  years). They found strong effect sizes for parenting practices (as measured by the Parenting Scale Total score; PS Total  $d = .72$ ) and child behavior outcomes on the Eyberg Child

Behavior Inventory (ECBI), (Intensity scale  $d = .75$ ; Problem scale  $d = .92$ ) which were maintained at follow up (Joachim et al., 2010). The second study, by Morawska, Haslam, Milne and Sanders (2011) was a randomized control trial of the Dealing with Disobedience Discussion Group. Participants included 67 parents (33 in intervention group; 34 in control group) of children ages 2-5 years ( $M = 3.6$  years;  $SD = .92$  years). This study showed promising results, with moderate effect sizes for parenting practices on the Parenting Scales (Laxness  $d = .51$ ; Over reactivity  $d = .60$ ; Verbosity  $d = .57$ ) and strong effect sizes for child behavior problems (ECBI Intensity  $d = 1.17$ ; Problem  $d = 1.07$ ) that were maintained at 6 month follow up (Morawska, Haslam, Milne, & Sanders, 2011).

The third study, by Morawska, Adamson, Hinchliffe and Adams (2014), was a randomized control trial of Hassle Free Meal Time Discussion Groups and included 86 parents (44 in intervention group; 42 in control group) of children ages 2-5 years ( $M = 3.72$ ;  $SD = 1.13$ ). They measured outcomes more directly related to feeding problems which included the Parent and Toddler Feeding Assessment (PAFTA) and general child adjustment and parent efficacy with the Child Adjustment and Parent Efficacy Scale (CAPES). They found moderate effects 4 weeks post- intervention in terms of feeding Frequency and Experience (PAFTA Frequency  $d = .77$ ; Experience  $d = .59$ ) but not for feeding problems, behavioral/emotional problems or parent efficacy (Morawska, Adamson, Hinchliffe, & Adams, 2014). The fourth study, by Dittman, Farruggia, Kepown and Sanders (2016), was a randomized control trial of the Dealing with Disobedience Discussion Group with 85 parents (45 in intervention group; 40 in control group). The unique aspect of this study was the omission of the two follow-up phone calls that occur in the two weeks following the group. There were significant differences between the treatment and waitlist control group at four-weeks post-intervention in terms of child problem behaviors (ECBI

Intensity  $d = .86$ ) and parenting practices (PS Laxness  $d = .57$ ; Over reactivity  $d = .52$ ; Verbosity  $d = .69$ ; Dittman, Farruggia, Keown, & Sanders, 2016). This suggests the follow-up phone calls may not be necessary to gain significant treatment effects for middle/upper class, college educated parents.

These promising findings contribute to the plethora of evidence supporting the other Triple P levels and implementation formats (e.g., individual, group, online, etc); however, the studies are not without limitations. These studies included some input from the intervention developer, which has been found to have a moderating effect on treatment outcomes (Tellegen & Sanders, 2014). Further, the studies were conducted in Australia with a community volunteer sample of parents who were predominantly middle class with college degrees. The next two studies evaluated Triple P outside of Australia with more diverse samples.

The fifth study, conducted in China by Chung, Leung and Sanders (2015), was a randomized control trial of Dealing with Disobedience Discussion Group that compared treatment effects to a waitlist control group and to a Level 4 Group. Level 4 Groups provide broad behavioral parent training during four, two-hour parent groups and four follow-up phone calls. The 91 parents (30 in Discussion Group; 30 in Level 4 Group; 31 waitlist control group) were predominantly upper class and college educated. The average child age was 2 years. The investigators did not find any significant differences in outcomes between parents in the Discussion Group and Level 4 Group. In comparison of outcomes for parents in the Discussion Group and the waitlist control parents three weeks post-intervention, small treatment effects were found in terms of child problem behaviors (ECBI Intensity  $d = .04$ ; Problems  $d = .29$ ) and parenting stress (as measured by the Parenting Stress Scale;  $d = .23$ ). The smaller effects found overall in this study are hypothesized to be the result of lower pre-test scores on child problem

behaviors which provided little room for growth post intervention. The lack of differences in treatment effects between the Level 4 Group and Discussion Group participants suggest that a brief intervention (i.e., Discussion Groups) may be enough support for parents not experiencing significant behavioral problems with their children.

The sixth study, by Mejia, Calam and Sanders (2015), was a randomized control trial of Dealing with Disobedience Discussion Groups with 108 low-income parents (54 in intervention group; 54 in control group) in Panama. To qualify for the study parents had to rate their children above the mean score in the ECBI Intensity scale (96 raw score points). Children ranged in age from 3 to 12 years ( $M = 8.5$ ;  $SD = 1.75$ ). The investigators found moderate to strong treatment effects in terms of child problem behaviors (ECBI Intensity  $d = .52$ ; Problems  $d = .23$ ) and parenting behaviors (PS Total scores  $d = .19$ ) at post intervention (2 weeks after intervention). At 3 and 6-month follow ups even stronger effects were found, but there were attrition rates of 24% and 35% for the control and treatment groups respectively (Mejia, Calam, & Sanders, 2015). For the fifth and sixth studies, the Discussion Groups were led in the native language of the parents by a native speaking accredited provider. The parent books were also translated into the parents' native language by Triple P International. However, the videos were played with subtitles in their native language rather than translating the audio. The study in Panama provides some evidence that Discussion Groups can produce significant treatment effects for low-income parents experiencing above-average intensity of child problem behaviors without changes to the curricula. The present study aimed to extend these findings by testing the effects of Discussion Groups for parents experiencing homelessness, regardless of the degree of child problem behaviors they report prior to the intervention.

No investigators to date have evaluated the effectiveness of Triple P with parents experiencing homelessness. There are two studies that have evaluated the use of Triple P in a shelter or shelter-like setting. The first was conducted by Glazemakers and Deboutte (2013), who investigated the effects of Level 4 groups for 10 parents with intellectual deficits in a residential program for parents who had experienced domestic violence. This non-controlled, small study conducted in Belgium suggested Triple P Level 4 was feasible in the shelter setting, but the authors found inconsistent outcomes across their measures of child social-emotional adjustment, parental anxiety and depression, and parenting behavior. For example, the measure of child social-emotional adjustment yielded six scale scores, but a significant effect was found only for conduct problems ( $d = .49$ ; Glazemakers & Deboutte, 2013). In the second study, Wessels and Ward (2016) investigated the acceptability of Triple P (tip sheets and parenting DVD) for women residing in domestic violence shelters in South Africa. Mothers rated common Triple P parenting strategies on their acceptability, usefulness, likelihood of use, and current use. Ratings of all indicators were high, suggesting mothers found Triple P acceptable. Parents reported that the most common barriers to implementing strategies were time constraints and living in a shelter (Wessels & Ward, 2016). This investigation was the first study to measure the effects of Triple P Discussion Group for families experiencing homelessness.

### **The Current Study**

The need for parenting interventions in shelters is apparent given the literature reviewed herein, but the research supporting the use of evidence-based programs in shelters is lacking. The current study was designed to fill this gap in knowledge as a way to potentially build the evidence base for promoting positive parenting and reducing risk for maltreatment among vulnerable families without homes. It was expected that parents would report significantly (a)

less intense child behavior problems, (b) less dysfunctional parenting practices, and (c) lower risk of committing child abuse at post-assessment (T2) than pre-assessment (T1). Treatment effects were expected to be maintained from T2 to T3. Whether the parents were satisfied with the intervention (a) immediately following the group and (b) three weeks after the group took place were exploratory research questions.

## **Method**

### **Participants**

There were 39 participants recruited from a single shelter. The participating shelter predominantly served low-income, single African American mothers with children under the age of 8 years, and there were no special eligibility requirements for admission to the shelter (e.g., victim of domestic violence, history of substance abuse). To be eligible to participate in the study, parents had to have a child between the ages of 2 and 6 years. Parents with multiple children were asked to complete measures on their child between the ages of 2-6 years with the most significant behavioral issues. Parents who had already participated in a Discussion Group or higher level of Triple P services and parents who did not speak English were not eligible to participate in the study. Ultimately, neither of those criteria excluded any parents from initial participation in the group or study.

The 39 mothers who participated in the study were predominantly African American (84.6%), had an average age of 29.31 years, and had never been married (79.5%). In terms of educational level, about 33% completed less than high school, 30% completed high school or GED equivalent, and 33% completed some college courses. In terms of employment, at the time of enrollment in the study, most parents reported no employment (61.5%). Most mothers

reported having one (38.5%) or two (23.1%) children residing with them in the shelter. Of the 39 target children, 69% were female and the average age was 3.67 years at pre-intervention.

Out of the 39 participants, eight did not attend the intervention group, making them ineligible to complete the remaining time points of data collection. Three participants were not able to be located for post-intervention data collection and an additional two participants who completed pre- and post-intervention assessments were unable to be located to complete the follow-up assessment. This left 26 participants who completed all three time points in the study, for an attrition rate of 33.33% which is less than the 50% attrition that existing literature suggests is typical (Shapiro, Kilburn, & Hardin, 2014). To ensure this sample size would provide adequate power to detect effects, an *a priori* power analysis (Faul, Erdfelder, Lang, & Buchner, 2007) was conducted with the effect size set to .45 and power set to .80. Results of this analysis revealed that 21 participants were needed; therefore, this sample size of 26 should have been adequate to detect effects.

## **Procedures**

Parents were recruited from one local shelter. Specifically, recruitment and pre-assessment (T1) took place during week one. The Discussion Group took place at the shelter during week two followed by individual phone calls at weeks three and four. At week five, post assessment (T2) occurred and at week 14 follow-up assessment (T3) occurred. For a detailed chart of study procedures see Appendix A. There were four Discussion Groups that took place across eight months with 14 participants in the first, nine in the second, seven in the third, and nine in the fourth.

In coordination with shelter staff and directors, I recruited participants face-to-face in common areas of the shelters (i.e., shelter lobby, common living areas, and dining hall) and via



flyers in the shelters. Parents were asked if they wished to attend a Discussion Group about parenting in about one week. During recruitment they were told about the free dinner, child care (for all of their children, regardless of age), and monetary incentives for completing the assessments (e.g., participating in the study). Once they signed up to participate in the group, parents were given the option to participate in the study by completing the pre- and post-intervention and follow-up assessments. Parents were given the opportunity to attend the group, receive free dinner and child care if they had a child outside of the study's target age range or if they did not want to participate in the study. Some parents chose to keep their youngest child (under 1.5 years of age) with them during the group which was permitted. Parents still residing at the shelter when the next parenting group occurred were not given the opportunity to attend the group again. This decision was made to prevent biasing group dynamics and discussion that could impact study results and as a way to control treatment dosage.

Funding for the Triple P materials utilized during the group was provided by a private foundation supporting the county-wide implementation of Triple P. Parents were incentivized to participate in the study via payment following completion of the measures at every time point. Parents were paid \$20 upon completing the pre-study (T1) measures, \$30 for completing the post-study (T2) measures, and \$40 for completing the follow-up (T3) measures. Funding for participant incentives, child care materials, and food served to families was provided by multiple internal university grants and an external fellowship awarded by the Doris Duke Charitable Foundation.

Time one data were collected the week before the group took place. Post-intervention data collection, T2, occurred approximately three weeks after the group. This short-term, post intervention assessment timeframe is standard across evaluations Discussion Groups that have

found promising effects in the past (Chung, Leung, & Sanders, 2015; Dittman et al., 2016; Joachim et al., 2010; Mejia et al., 2015; Morawska et al., 2014; Morawska et al., 2011). Time three, follow-up data collection, took place three months after the group occurred. To reduce the likelihood of attrition due to the transient nature of this population (Shapiro, Kilburn, & Hardin, 2014) the follow up period was shorter than other evaluations of Discussion Groups.

Additionally, participants were asked to provide three forms of contact including a personal cell phone number, personal email address, and the phone number of a close friend or family member with whom the parent stayed in touch. During follow-up phone calls or meetings to complete measures, participants were given the opportunity to update any contact information.

All data were collected in person and parents were provided one-on-one instructions on how to complete the measures and an overview of the consent form before completing the measures at each time point. Procedures were approved by the investigator's university IRB.

**Intervention.** Level 3 Discussion Group is a two-hour parent behavioral skills training intervention. Discussion Groups cover one of four topics: dealing with disobedience, managing fighting and aggression, developing good bedtime routines and hassle-free shopping for children. As described above, prior studies involved delivery of a single topic. For the current study, only Dealing with Disobedience was delivered. At the beginning of the group, parents were given a workbook to aide their participation in the group and implementation of the strategies with their children after the group. The structure of the Group included a standardized power point presentation with embedded example videos and allowed ample time for discussion of the strategies presented. Then, the provider attempted to complete two follow up phone calls over the two weeks following the intervention to discuss any barriers the parents were experiencing in using the strategies and to provide praise and corrective feedback as needed. There is a semi-

structured format used for these phone calls, which are designed to last about 20 minutes. Notably, less than 25% of participants participated in either of the two phone calls during this time period. Therefore, this discussion took place in-person prior to the post-intervention measures (T2) being completed.

Triple P is a manualized intervention that requires providers to attend an intensive multi-day training and pass an accreditation exam. This investigator completed the training and accreditation process and conducted all the Discussion Groups for this study. The ideal group size recommended by the program developer is six to eight parents per provider, though up to 10 parents have been included in past studies with strong results. Therefore, the goal was to include approximately 10 parents per group. Ultimately, 14 parents were recruited for the first group, nine for the second group, seven for the third, and nine for the fourth and final group. Groups were held at the shelter between 5:30pm and 8pm, a mutually convenient time for parents and shelter programming staff. Dinner and child care were provided to reduce common barriers to participation.

All trained providers complete adherence checklists, developed by Triple P, during every group. For this study, adherence checklists were utilized to complete a fidelity check on implementation. To check the reliability of the provider-completed checklists, the provider was observed during all of the groups by another provider accredited in level 3 Discussion Groups, who independently completed the adherence checklist while the group was taking place. Both the provider and observer for this study rated fidelity at 100% for all four groups. While formal adherence checklists were not available for the phone call follow-ups, a standard form developed by the researcher was used to guide the discussion.

## Measures

**Parenting Practices.** The Parenting Scale (PS; Arnold, O’Leary, Wolff & Acker, 1993; Rhoades & O’Leary, 2007) was used to assess the parents’ self-reported parenting behavior at every time point. The 30-item self-report questionnaire utilizes a 7-point Likert scale and each item asks parents to rate their parenting style in relation to two possible responses to various parenting scenarios. For example, parents are given the scenario “when my child misbehaves...” then parents choose between “I usually get into a long argument with my child” (anchored at 1) or “I don’t get into an argument” (anchored at 7). Three mean subscale scores (Laxness, Over reactivity and Hostility) are generated by totaling the item ratings for each subscale then dividing the sum by the number of items on the subscale. Some items are reverse scored, like the example provided. The “ideal” or positive parenting response to each scenario is scored a 1 and the dysfunctional response is scored a 7. A Total score is generated by summing all items. The higher the score, the more dysfunctional parenting practices the parent is reporting.

The Total score has been found to have adequate test-retest reliability (.89) and internal consistency ( $\alpha = .79$ ; Arnold et al., 1993; Harvey, Dansforth, Ulaszek, & Eberhardt, 2001) and can adequately discriminate between clinical and non-clinical populations (Arnold et al., 1993). The test-retest and internal consistency of the Laxness (.87;  $\alpha = .72$ ), Over reactivity (.89;  $\alpha = .78$ ) and Hostility (.23;  $\alpha = .73$ ) subscales are less strong; therefore analyses were completed with only the Total score (Salari, Terreros, & Sarkadi, 2012). The PS has been widely utilized in the evaluation of Triple P (Bodenmann, Cina, Ledermann, & Sanders, 2008) and has been found appropriate for use with high risk populations (Steele, Nesbitt-Daly, Daniel, & Forehand, 2005). For this study, the internal consistency of the Total score across time 1 ( $\alpha = .67$ ), time 2 ( $\alpha = .80$ ) and time 3 ( $\alpha = .90$ ) ranged from questionable to excellent.

**Child Problem Behaviors.** The Eyberg Child Behavior Inventory (ECBI; Eyberg & Ross, 1978) is a 36-item parent-report measure of child behavior problems for parents of children ages 2 to 16 years. The ECBI was used to evaluate child problem behaviors at every time point. For each item, parents were asked to rate how often the child exhibits that behavior on a Likert scale of 1 to 7 (1 = never; 7 = always) (Intensity scale) and if they considered that behavior to be a problem by circling “yes” or “no” (Problems scale). Some example items include “has tantrums” and “argues with parents about rules.” Raw scores were generated by adding up the Likert scale points for the Intensity scale and by counting the number of “yes’s” for the Problem scale. Raw scores from the Intensity scale from this measure were used as an outcome measure in this study, similar to other studies who used this measure for evaluation of Triple P Discussion Groups (Chung et al., 2015; Dittman et al., 2016; Joachim et al., 2010; Mejia et al., 2015; Morawska et al., 2014, 2011). The ECBI has adequate test-retest reliability (Problem = .86; Intensity = .88) and internal consistency (Intensity  $\alpha$  = .93; Problem  $\alpha$  = .91; Burns & Patterson, 1990). It can validly identify high-risk children with problem behaviors as early as 12 months of age. For this study, the internal consistency of the Intensity score across time 1 ( $\alpha$  = .96), time 2 ( $\alpha$  = .95) and time 3 ( $\alpha$  = .94) were excellent.

**Child Abuse Risk.** Parents completed the Brief Child Abuse Potential Inventory (BCAP; Ondersma, Chaffin, Mullins, & LeBreton, 2005) to assess maltreatment risk at every time point. This is the short form of Milner’s 1986 original 160-item Child Abuse Potential Inventory which includes 25-items that make up the Risk scale, a 3-item Random Responding scale, and a 6-item Lie Scale. Parents answered each item by circling if they agreed or disagreed with the statement. Some example items include: “I am often upset” and “Children should be quiet and listen”. The Risk total score, a primary outcome variable in this study, was summed according to (Ondersma

et al., 2005), with a higher score indicating a greater potential for abuse. The Lie subscale identifies parents who may be “faking good” with scores of 4 or higher indicating the protocol may be invalid. The Random Responding subscale attempts to identify invalid protocols in which parents are randomly responding to answers with scores of 1 or higher indicating the protocol may be invalid. However, the reliability and utility of the Lie and Random Responding subscales with high-risk samples has been less than adequate in past studies (Walker & Davies, 2012; Walker & Davies 2010). Previous studies have found a conservative clinical cut off score of 12 on the Risk scale resulted in .91 sensitivity and .93 specificity (Ondersma et al., 2005). The BCAP Risk scale has strong internal consistency (.89), significantly overlaps with the full CAP Abuse Risk score ( $r = .96$ ) and was associated with measures of parenting behavior, depression, substance abuse, anti-social behavior and is most highly (Kelley, Lawrence, Milletich, Hollis, & Henson, 2015; Ondersma et al., 2005; Walker & Davies, 2010). For this study, the internal consistency of the Risk score across time 1 (Kuder-Richardson 20 = .79), time 2 (Kuder-Richardson 20 = .79) and time 3 (Kuder-Richardson 20 = .84) was acceptable. On the Random Responding scale between 7% and 15% (depending on time point) scored 1 or more indicating the protocol may be invalid. On the Lie scale, between 25% and 31% scored 4 or more indicating the protocol may be invalid.

**Client Satisfaction.** Triple P provides two measures of parents’ satisfaction with services. First, parents completed a 10-item Discussion Group Satisfaction Questionnaire (DG-SQ) immediately following the group. This questionnaire utilizes a 7-point Likert scale and provides immediate feedback about how helpful parents believe the information will be and how well the provider facilitated the group. Additionally, the Client Satisfaction Questionnaire (CSQ) was utilized to assess parent satisfaction with the Discussion Group at T2. The 14-item self-

report questionnaire asked the parent to rate how well Triple P met their needs. Item eight (e.g., “has Triple P improved your relationship with your partner?”) on the original 14-item scale was not included for this sample because less than 15% reported having a “partner” who shares parenting responsibilities. It takes about five minutes to complete the included 12, 7-point Likert scale items and one free response item. Likert scale item scores are summed to yield a Total satisfaction score with a potential range of 12 to 84 (for 12 items rather than 13). The CSQ is provided with Triple P training materials and is regularly administered by providers following the completion of service despite the lack of research on psychometric properties (Sanders, Kirby, Tellegen, & Day, 2014). One investigator did report an internal consistency of .81 but evidence for test-retest reliability and validity is lacking (Sanders, Kirby, Tellegen, & Day, 2014). For this study, the internal consistency of the DG-SQ Total score ( $\alpha = .89$ ) and CSQ Total score ( $\alpha = .98$ ) was acceptable to excellent.

**Demographics.** Participants reported their marital status, age, highest level of educational attainment, race, sex, current residence, number of children in their care, current and previous six months of mental health services received for themselves or their target child, target child sex and age on a demographic form at each time point. At T2 and T3 parents were asked a yes or no question “have any major life changes occurred since the last time we met?” If they answered yes, they were asked to describe what change(s) occurred (e.g., child care changes, work status changes, moving out of the shelter, etc). These questions were added to better understand threats to the internal validity of the study such as history (i.e., changes that occur between assessment time points that could attribute to treatment effects; Shadish, Cook, & Campbell, 2002). At T2 about 40% of parents reported a major life change had occurred since last seeing the examiner. Some major changes reported included: having a child removed and

returned to them via CPS involvement, job changes, childcare changes, or death in the family. Notably, no two participants reported the same major life change at T2. At T3 about 86% of participants reported experiencing a major life change. Some changes reported were similar to T2 but the most frequently reported changes were leaving the shelter (48%) and childcare changes (30%).

## **Results**

### **Preliminary Analyses**

To check that the data were ready for analyses and to describe the data, a series of preliminary analyses were conducted. First, to comprehensively describe the data, sample means, medians, ranges, skewness, kurtosis and standard deviations were calculated for all variables (see Table 1). Highly skewed or kurtotic variables were not transformed because Multivariate Analysis of Variance (MANOVA) analyses are robust enough to withstand most abnormalities in data (Field, 2009).

To determine if data were fit for MANOVA analyses, correlations among all of the dependent variables were computed (see Table 2). No correlation coefficients exceeded .80 which would have warranted a separate ANOVA for the correlated dependent variables due to concerns about multicollinearity (Pallant, 2010). Therefore, all variables were included in the single RM-MANOVA analyses to lessen the likelihood of Type 1 error.

### **Dropout Analyses**

To determine if participants who dropped out of the study were significantly different from participants who completed the study, *t*-tests or chi-square analyses were completed. Of the 39 participants, 26 completed data collection at all three time points, two participants completed data collection at two time points (T1 and T2), and 11 participants only completed data



collection at T1. For dropout analyses, the two participants who completed T1 and T2 were grouped with participants who dropped out after T1. No significant mean differences were found between participants who completed all three time points and those who did not on two out of three of the primary outcome variables at pre-assessment (ECBI and BCAP). There was a significant difference between participants who completed all three time points ( $M = 106.73$ ,  $SD = 21.61$ ) and those who did not ( $M = 91.08$ ,  $SD = 13.66$ ) on the PS ( $t [37] = -2.38$ ,  $p = .023$ ). In terms of demographic characteristics (i.e., marital status, parent education level, parent employment, parent race, child race, child sex, parent age, child age), chi-square or  $t$ -tests analyses did not find any significant differences between participants who completed all three time points and those who did not.

### **Primary Analyses**

Primary analyses were conducted twice, once using listwise deletion methods which resulted in a sample of 21, and again using the last observation carried forward (LOCF) method to impute missing data, which resulted in a sample of 37 (missing items on some measures resulted in invalid total scores, so those scores were not included in analyses). LOCF provides a conservative estimate of treatment effects and has an equally low risk of Type 1 error as other more complex data imputation methods (Overall, Tonidandel, & Starbuck, 2009). To test primary hypotheses, a one-way within-subjects repeated measures multivariate analysis of variance (RM-MANOVA) was used to determine if there were significant differences in PS, ECBI, and BCAP scores across time. This method was chosen because it can assess changes in all dependent variables in a single analysis, which lessens the risk of Type 1 error (Tabachnick & Fidell, 2001). Results from the RM-MANOVA using listwise deletion methods revealed a significant within-subjects effect of time (Wilks' Lambda = .45,  $F [6, 76] = 3.22$ ,  $p = .007$ ;

multivariate partial eta squared = .20). Results from the RM-MANOVA using LOCF data imputation were similar, also revealing a significant within-subjects effect of time (Wilks' Lambda = .64,  $F [6, 31] = 2.91, p = .023$ ; multivariate partial eta squared = .36). All following univariate analyses were conducted using listwise deletion rather than imputed data to provide the most conservative estimate of treatment effects because similar results were found using both imputed data via LOCF and listwise deletion.

Paired samples *t*-tests were utilized to determine treatment effects on individual dependent variables. Results from paired samples *t*-tests revealed statistically significant change on the PS occurred between T1 and T2 ( $t [27] = 2.97, p = .006$ ) while statistically significant change on the ECBI occurred between T1 and T3 ( $t [27] = 2.36, p = .02$ ). No statistically significant changes were found between any time points on the BCAP. Results from all paired samples *t*-tests can be found in Table 3.

### **Exploratory Analyses**

The mean score and standard deviation on the Discussion Group Satisfaction Questionnaire (DG-SQ;  $M = 6.30; SD = 0.71$ ) and Client Satisfaction Questionnaire (CSQ;  $M = 5.71; SD = 1.10$ ) were very high (averaged 6 or higher ratings out of a possible 7) suggesting mothers experiencing homelessness found the Discussion Group acceptable to meet their parenting needs. Means, standard deviations and ranges for all items and total scale scores on the DG-SQ and CSQ can be found in Tables 5 and 6. One notable item on the CSQ asked parents at T2 to rate how much their child's behavior had improved and mothers reported an average score of five out of a possible seven, indicating parents believed their child's behavior had slightly improved. Additionally, a paired samples *t*-test revealed no significant difference in their immediate satisfaction (measured by DG-SQ total scale score) and their satisfaction three weeks

later (measured by CSQ total scale score;  $t [20] = 1.32, p = .20$ ) indicating no significant difference in their mean satisfaction rating from T1 to T2.

### **Discussion**

Families experiencing homelessness have well documented high rates of child welfare involvement (Keeshin & Campbell, 2011; Park, Metraux, Brodbar, & Culhane, 2004) and face cumulative risks across multiple levels of influence (e.g., individual, familial, contextual, etc) that increase their likelihood of engaging in child maltreatment (Buckner, 2008; Cutuli & Herbers, 2014; Weinreb, Buckner, Williams, & Nicholson, 2006). Despite this risk, there is little research on the effectiveness or acceptability of evidence-based parenting programs for families residing in shelters—a large gap in the literature this study aimed to fill. In fact, this study is the first to evaluate the use of Triple P Discussion Groups in the context of shelters for families experiencing homelessness.

Overall, this study provides preliminary evidence that Triple P Discussion Groups are effective at decreasing dysfunctional parenting practices and child problem behaviors for families residing in shelters. Parents reported significant changes in their parenting behavior three weeks after the intervention but did not report significant changes in their child's behavior until three months after the group. This pattern is unique and not a pattern reported in other studies that evaluated the effectiveness of Triple P Discussion Groups (Chung & Sanders, 2015; Dittman et al., 2016; Joachim et al., 2010; Mejia, Calam & Sanders, 2015; Morawska et al., 2011; Morawska et al., 2014). However, given the mechanism by which child behavior change is hypothesized to occur (i.e., social learning model of parent-child interaction; Patterson, 1982), changes in parent behavior preceding changes in child behavior is not surprising. For example, Forehand, Lafko, Parent and Burt (2014) found changes in parent behavior mediated changes in

child behavior in 45% of the published studies on behavioral parent training. Considering the high level of stressors parents experiencing homelessness are facing (Barnett, 2008; Friedman, 2000; Swick & Williams, 2010), it is not surprising that it may take longer for parenting behavior to change when compared to high-income samples, which then may produce changes in children's problem behaviors.

Despite decreases in dysfunctional parenting practices and child problem behaviors following the intervention, there were no changes in parents' child abuse risk as measured by the Risk score on the BCAP. This was a disappointing finding that was contrary to the hypothesis. Lack of change in risk for abusive parenting could be explained by several factors. First, the BCAP is a more distal measure of treatment effectiveness because it does not directly assess parenting behavior or child behavior—the two main targets of Triple P Discussion Groups. While scores on the BCAP have been correlated with parenting behavior in prior studies, scores are most closely correlated with measures of parental psychological well-being (Dawe, Talpin & Mattick, 2017) and there is mixed evidence on Triple P Discussion Groups effectiveness at improving psychological well-being of parents. For example, out of the three studies on Discussion Groups that measured parental psychological well-being, only one found significant changes (Dittman, Farruggia, Keown, & Sanders, 2016; Joachim, Sanders, & Turner, 2010; Mejia, Calam, & Sanders, 2015).

A second explanation for the lack of change in abuse risk is that the mean Risk score of this sample was elevated ( $M = 11.82$ ) and was just below the conservative clinical cutoff of 12. In fact, 61% of the sample scored 12 or higher on the Risk scale at pre-assessment, suggesting that more than half of the mothers were at high risk for abusive parenting. In other studies that have utilized the CAP as a predictor of treatment outcomes, sample mean scores prior to

intervention have not approached the risk score cut off (Costello & Moreland, 2015). Therefore, it could be that the mothers in this study were at a substantially higher risk than was typical of other samples at pre-assessment, and might have needed more intensive intervention than a 2-hour discussion group to experience reductions in risk for abuse. More information is needed to determine if the BCAP is sensitive enough to detect changes from a one-time 2-hour discussion group or if the intervention is not sufficient enough to change more distal treatment outcomes with high-risk samples. It is noteworthy that the percentage of mothers meeting the clinical cut off decreased from 61% at pre-assessment to 41% at post-assessment then increased again to 52% at follow-up assessment, so there was positive change for some of the mothers.

Importantly, parents reported high satisfaction ratings with the program initially and again three weeks later suggesting the program, unaltered, is acceptable and highly satisfactory to this unique and vulnerable population of parents. Taken in the context of the existing literature, this study suggests Triple P Discussion Groups are a potentially effective and acceptable way to support parents residing in shelters. These high satisfaction ratings align well with other published studies that evaluated other levels of Triple P in shelter environments (Haskett, Armstrong, Neal, Aldianto, 2018; Wessels & Ward, 2016), but this study is the first of its kind in the literature to report on the satisfaction of Level 3 Discussion Groups. Given the high acceptability of the intervention, Triple P Discussion Groups should be considered for wide use in shelters.

Although the fidelity to the Triple P Discussion Group model during the groups was 100% as assessed by the provider and second accredited observer, there were some discussion topics and notable group adverse reactions that are important to mention because they highlight the providers' ability to adapt the intervention to meet the unique needs of this sample while

maintaining fidelity to the model. For example, at the start of the first group, a parent asked why the provider wanted to offer Triple P to the parents; she wondered whether the mothers had been targeted for the intervention because it was assumed they were “all bad parents” and in need of parenting intervention. From that point forward, the provider always began each group by normalizing parenting struggles and explicitly stating that residing at the shelter did not make participants a “bad parent.” Additionally, each group had a negative reaction to the video segment that provided an example of the recommended time out routine in which a child was put in the bathroom with the door closed for time out. Given the high involvement of Child Protective Services amongst this population, their reaction to using a closed room for time out should be considered normative and other, more acceptable ways to utilize time out were discussed among the group that did not involve locking a child in a room unsupervised. Lastly, several topics that were unique to living in shelters were discussed spontaneously at all four groups. Those topics included places to conduct time outs in the shelter setting, maintaining safety of children in an unsafe shelter environment (e.g., on bunk beds, concrete floors, etc), their shared experiences of homelessness, how homelessness had impacted their children, stressors of parenting in public, and use of group positive behavior charts for use by all the families in communal sleeping spaces. Facilitators providing Discussion Groups in shelters could consider incorporating these elements into the introduction of the group and discussion throughout the group or, at a minimum, be prepared to converse about these issues if they come up in discussion. The ability to talk about these concerns brought up parents is an advantage of the Triple P Discussion Group model that allows ample flexibility to address the unique concerns and ideas of parents residing in shelters while maintaining fidelity to the intervention.

The wide variability found amongst the families who participated in this study highlights heterogeneity within the sample and the resilience of many of these families. For example, scores on the ECBI (parent-reported child problem behaviors) ranged from more than a standard deviation above the average to a standard deviation below the average. While the ECBI is the only measure that provided the opportunity for comparison against the normative sample, there was wide variability present in terms of abuse risk and dysfunctional parenting practices as well. This wide variability is not a novel finding (Cosgrove & Flynn, 2005; Gewirtz, DeGarmo, Plowman, August, & Realmuto, 2009) and speaks largely to the resilience many of these mothers and their young children were experiencing in spite of their very difficult circumstances. Despite this resilience and evidence of individual differences in functioning among parents and children who face homelessness, it is important to note that mothers involved in this study demonstrated overall risk for negative parenting in terms of scores on measures of child behavior problems and abuse potential. Specifically, almost half of the mothers (47%) met or exceeded the clinical cut off indicating serious child behavior challenges and 61% met or exceeded the clinical cut off indicating elevated risk for child abuse. Overall, utilization of the full Triple P system within shelter environment could provide the variety of intensity of services needed to meet the individual needs of parents experiencing homelessness. This study highlights that a mid-level intensity of Triple P, such as Discussion Groups, could be sufficient for some parents experiencing homelessness, while others may benefit from more or less intensive support.

The Triple P system—designed to be a population level intervention—promotes minimal sufficiency, and while many providers may be inclined to deliver a higher level of service for parents experiencing homelessness, this study suggests that Level 3 Triple P Discussion Groups may be sufficient for some families. Given the variability of scores across the three outcome

measures, it is likely some parents who attended the group did not need this intervention and there were some parents who could have benefited from more intensive intervention. Previous literature on Triple P Discussion groups have selected participants based on their scores on measures of child problem behaviors being above the sample average or above the clinical cut off—but this study found effects within a sample with large variability that had higher-than average reported child problem behaviors. In summary, these promising preliminary effects and high satisfaction ratings of Triple P Discussion Groups suggests that Discussion Groups are a potentially effective and acceptable way to decrease the risk of maltreatment for families experiencing homelessness residing in shelters with children ages 2 to 6 years of age.

### **Limitations and Future Directions**

While this study does provide preliminary evidence to support the use of Triple P Discussion Groups in shelters, it is not without limitations. The most serious limitation is the lack of a control group, which would have allowed for more conclusive results regarding treatment effectiveness. Without a treatment-as-usual or wait-list control group, it is difficult to rule out confounding variables that could explain the changes in parenting and child behavior found in this study. It is possible that passage of time could account for the changes. Another limitation of this study is that the primary investigator of the study also served as the intervention provider, decreasing the external validity and generalizability of the results. Ideally, an accredited Triple P provider from the community or shelter would have facilitated the groups to increase external validity and allow this study to address sustainability of the program beyond the aims of this study.

In terms of measures used in this investigation, a multi-method multi-informant assessment would have provided the strongest measurement of treatment outcomes, but that



approach was not feasible due to limits on time and funding. Future studies could use a second rater of child problem behaviors (e.g., such as shelter case manager or child care provider) and observational measures of parent-child interactions and child behaviors to more comprehensively assess changes in parent and child behavior across time. Additionally, internal consistency of the Parenting Scale was marginally acceptable at pre-assessment ( $\alpha = .67$ ), but was reasonable at later time points. Instructions provided to the first group of parents assessed were minimal, and several parents seemed confused by the anchored statements and seven-point Likert scale rating system that was similar but more complicated than the seven-point intensity scale on the ECBI which they had just completed. In subsequent assessment sessions, more comprehensive instructions were provided to the mothers individually by the investigators before they completed the PS. Investigators must carefully administer measures to this highly stressed group of parents who reside in crowded, chaotic environments, to lessen the likelihood of low internal reliability.

In terms of threats to internal validity of the study, there was a 33% attrition rate among participants and intent-to-treat analyses were not feasible due to the with-in group design of the study. At pre-assessment mothers who dropped out of the study endorsed significantly lower dysfunctional parenting practices as measured by the Parenting Scale. It is unclear if their lower endorsement of dysfunctional practices or potential perceived lack of needing parenting support contributed to their willingness to attend the group. Most parents who dropped out reported work conflicts, shelter demands, moving residences (within the shelter, or moving out of the shelter) as reasons why they could not attend the group. Despite most reasons for drop-out being related to parents leaving the shelter, many parents who left the shelter were still able to be located and completed assessment at follow-up ( $N = 11$ ). Future larger, controlled studies could better account for drop-out, which was less than anticipated given the transient nature of the population

(Shapiro, Kilburn, & Hardin, 2014). An additional threat to internal validity was the fact that many mothers reported major life changes had occurred between pre- and post-intervention and follow-up assessments. Without a control group, it is difficult to attribute changes to the intervention alone, as other major life events were occurring at the same time for these families (e.g., job/child care changes, moving residences, etc.). However, it is impressive that parents reported significant changes in parenting practices and child problem behaviors despite stressful life changes occurring during this time.

In terms of fidelity to the Triple P model, it is important to note that although fidelity was assessed at 100% in the groups, completion of the follow-up phone calls was very low. Less than 25% of mothers completed even one of the two planned follow-up phone calls, and no mothers completed both phone calls in the two weeks following the group. Many mothers expressed not having cell phone minutes to talk on the phone, but they maintained the ability to text via wireless connection for scheduling post-intervention and follow-up assessments. Completion of follow-up contacts with parents via text was beyond the capacity of this study due to limits on time, but future studies could conduct follow-up via text or in-person to determine if contact by phone is necessary. Alternatively, future studies could remove the follow-up phone calls considering this study found effects without completion of phone calls. In fact, Dittman and colleagues (2016) found strong effects without inclusion of the individual phone calls with a middle to high income sample.

In terms of limitations related to characteristics of participants, generalization of findings is restricted to mothers experiencing homelessness and residing in shelters. Similar to the rest of the existing literature on parenting support in the context of homelessness, fathers were not available for participation because they were not allowed to reside at the shelter. Future research

is necessary to determine whether this intervention is effective for fathers experiencing homelessness though previous studies that included fathers in Discussion Groups did not find parent gender differences related to treatment outcomes (Morwaska et al., 2011; Morwaska et al., 2014). Further, future investigations should be designed to examine the impact of Triple P Discussion Groups delivered to homeless parents that are not residing in shelters. The majority of homeless families live doubled-up and in low-rate hotels and motels (U.S. Department of Education, 2016). Reaching and serving these parents might be even more challenging than serving families in shelters, but given the high number of families living in these chaotic, crowded, stressful circumstances, we should make a concerted effort to serve these families with Triple P.

Future studies could be designed to address the limitations of this study to further determine treatment effects for this vulnerable population. Funding and agency buy-in are necessary precursors to complete a fully randomized experimental design of Triple P Discussion Groups in shelters. The current study provides the preliminary evidence needed to seek the substantial funding required to complete more rigorous studies in the future. Additionally, this study provides evidence that extensive adaptations to evidence-based programs may not be necessary to serve vulnerable and underserved populations in ways that are viewed as highly acceptable and effective. Triple P Discussion Groups appear to provide enough flexibility within fidelity to meet the unique needs of mothers experiencing homelessness and show strong promise for being both acceptable and effective.

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**Table 1***Outcome Variable Descriptives*

Outcome	<i>N</i>	<i>M</i>	Median	SD	Range	Skewness	Kurtosis
ECBI							
Time 1	38	126.79	124.50	44.65	59-227	.19	-.80
Time 2	27	120.26	114.00	38.30	63-208	.51	-.68
Time 3	26	114.31	116.50	38.40	54-188	.08	-1.20
PS							
Time 1	39	101.51	97.00	20.54	67-161	.91	.83
Time 2	28	96.18	98.50	26.34	33-175	.30	2.49
Time 3	26	90.19	86.00	25.02	49-140	.37	-.71
BCAP							
Time 1	33	11.82	12.00	5.99	1-22	-.28	-.81
Time 2	22	10.77	9.50	6.31	1-19	-.11	-1.13
Time 3	25	11.64	10.00	5.93	2-23	.20	-.76

**Table 2***Correlations Among Outcome Variables*

Outcome	Time 1			Time 2			Time 3		
	ECBI	PS	BCAP	ECBI	PS	BCAP	ECBI	PS	BCAP
ECBI	-	.26	.29	-	.39*	.20	-	.33	.10
PS	.26	-	.17	.39*	-	-.08	.33	-	.27
BCAP	.29	.17	-	.20	-.08	-	.10	.27	-

\* $p < .05$



**Table 3***Paired Samples T-tests*

		Time 1	Time 2	
	<i>N</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>t</i>
ECBI	26	124.88 (44.78)	118.73 (38.21)	1.39
Parenting Scale	28	105.68 (21.19)	96.18 (26.34)	2.97**
BCAP	24	12.25 (6.01)	11.50(6.68)	0.96

  

		Time 2	Time 3	
	<i>N</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>t</i>
ECBI	25	121.68 (39.50)	112.76 (38.35)	1.25
Parenting Scale	26	96.04 (27.16)	90.19 (25.02)	1.48
BCAP	24	11.38 (6.56)	10.79 (6.09)	0.47

  

		Time 1	Time 3	
	<i>N</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>t</i>
ECBI	25	130.28 (44.22)	112.68 (38.26)	2.36*
Parenting Scale	26	106.73 (21.61)	90.19 (25.02)	4.82**
BCAP	24	12.54 (6.17)	11.00 (6.35)	1.37

\* $p < .05$ ; \*\* $p < .01$

**Table 4***Discussion Group-Satisfaction Survey Descriptives*

Item	<i>N</i>	<i>M</i>	<i>SD</i>	Range
Quality of service	35	6.37	1.03	3-7
Type of help	35	6.31	0.93	4-7
Extent met parent needs	35	5.57	1.15	3-7
Satisfied with amount material	35	6.11	1.02	4-7
Sufficient knowledge to implement	35	6.60	0.88	3-7
Intend to implement	35	6.37	1.06	3-7
Satisfied with content	35	6.51	1.22	1-7
Satisfied with format	31	6.84	0.89	4-7
Seek Triple P again	31	6.68	0.87	3-7
Develop skills apply to others	31	6.42	0.96	4-7
10 Item Scaled Score Total	31	6.30	0.71	3.70-7

**Table 5***Client Satisfaction Questionnaire Descriptives*

Item	<i>N</i>	<i>M</i>	<i>SD</i>	Range
Quality of service	28	6.39	0.96	3-7
Type of help	28	6.07	1.27	1-7
Extent met child needs	27	5.19	1.50	1-7
Extent met parent needs	28	5.25	1.43	1-7
Satisfied with amount material	28	5.79	1.35	1-7
Helped deal with child behavior	28	5.86	1.24	1-7
Helped deal with family problems	28	5.61	1.34	1-7
Overall satisfaction with Triple P	28	5.93	1.36	1-7
Seek Triple P again	28	6.39	1.32	1-7
Develop skills apply to others	28	5.96	1.50	1-7
Child's behavior improved	28	5.07	1.22	1-7
Satisfied with child's progress	28	5.18	1.34	1-7
12 Item Scaled Score Total	28	5.71	1.10	1.17-7

## APPENDIX

## Appendix A

Procedures Example Chart

<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>	<b>Week 5</b>	<b>Week 14</b>
T1	Group 1	Phone Call	Phone Call	T2	T3

T1 measures = Demographic form, PS, ECBI, BCAP

After group = DG-SQ

T2 = Update Demographic form, PS, ECBI, BCAP, CSQ

T3 = Update Demographic form, PS, ECBI, BCAP